

WHAT IS CLAIMED IS:

1. A telecommunications device, comprising:
a local area network; and
a sender coupled to the network and operable to generate a message packet
comprising an arbitration code and a data packet, the sender operable to communicate a
first value of the arbitration code using the network and to determine a network value, the
sender operable to compare the first value with the network value to determine whether
the sender may communicate the data packet using the network.

2. The device of Claim 1, wherein the device is a switching unit further
comprising a backplane and the network comprises a control bus.

3. The device of Claim 1, wherein the message packet is a physical layer
message packet and the data packet comprises a message packet associated with a higher
level protocol selected from the group consisting of:

Internet Protocol (IP);
Transmission Control Protocol (TCP); and
User Datagram Protocol (UDP).

4. The device of Claim 1, wherein the arbitration code comprises:
a message priority code; and
a sender address.

5. The device of Claim 1, wherein the sender is operable to determine that it
may not communicate the data packet if the first value does not match the network value.

6. The device of Claim 1, wherein the sender is further operable to
communicate a second value of the arbitration code using the network if the first value
matches the network value.

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7. The device of Claim 6, wherein the first and second values of the arbitration code are selected from the group consisting of:

first and second message priority code values;
a first message priority code value and a second sender address value; and
first and second sender address values.

8. The device of Claim 1, further comprising a second sender coupled to the network and operable to generate a second message packet comprising an arbitration code and a data packet, the second sender operable to communicate a first value of the arbitration code for the second message packet using the network and to determine the network value, the second sender operable to compare the first value for the second message packet with the network value to determine whether the second sender may communicate the data packet for the second message packet using the network.

9. The device of Claim 1, wherein the message packet further comprises a destination code, the sender operable to communicate the data packet to one or more receivers as a point-to-point, multi-cast, or broadcast message according to the destination code.

10. The device of Claim 1, further comprising a plurality of receivers also coupled to the network, the message packet further comprising a destination code having values for a plurality of positions, each position corresponding to a particular receiver, the sender identifying one or more receivers for the message packet according to the values of the positions corresponding to the receivers.

11. The device of Claim 10, wherein each receiver has an associated receive code comprising values for a plurality of positions, each position corresponding to a particular receiver, each receiver operable to receive the destination code and to compare the value for at least one position of the destination code with the value for at least one position of the receive code, each receiver operable to determine whether to receive the data packet according to the comparison.

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12. The device of Claim 11, wherein at least one of the receivers is operable to perform network snooping according to its associated receive code.

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13. A telecommunications device, comprising:

a local area network;

a plurality of receivers coupled to the network; and

5 a sender coupled to the network and operable to generate a message packet comprising a destination code and a data packet, the destination code having values for a plurality of positions, each position corresponding to a particular receiver, the sender operable to identify one or more receivers for the data packet according to the values of the positions corresponding to the receivers, the sender operable to communicate the data packet to the identified receivers.

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14. The device of Claim 13, wherein the device is a switching unit further comprising a backplane and the network comprises a control bus.

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15. The device of Claim 13, wherein the message packet is a physical layer message packet and the data packet comprises a message packet associated with a higher level protocol selected from the group consisting of:

Internet Protocol (IP);

Transmission Control Protocol (TCP); and

User Datagram Protocol (UDP).

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16. The device of Claim 13, wherein the sender is operable to communicate the data packet to one or more identified receivers as a point-to-point, multi-cast, or broadcast message according to the destination code.

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17. The device of Claim 13, wherein the sender is operable to communicate the destination code to each receiver and each receiver has an associated receive code comprising values for a plurality of positions, each position corresponding to a particular receiver, each receiver operable to receive the destination code and to compare the value for at least one position of the destination code with the value for at least one position of the receive code, each receiver operable to determine whether to receive the data packet according to the comparison.

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18. The device of Claim 17, wherein at least one of the receivers is operable to perform network snooping according to its associated receive code.

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19. A message packet for communication using a local area network within a telecommunications device, comprising:

a data packet; and

an arbitration code comprising a message priority code and a sender address, a first value of the arbitration code operable to be communicated using the network and to be compared with a network value to determine whether the sender may communicate the data packet to the receiver using the network.

20. The message packet of Claim 19, wherein the device is a switching unit comprising a backplane and the network comprises a control bus.

21. The message packet of Claim 19, wherein the message packet is a physical layer message packet and the data packet comprises a message packet associated with a higher level protocol selected from the group consisting of:

Internet Protocol (IP);

Transmission Control Protocol (TCP); and

User Datagram Protocol (UDP).

22. The message packet of Claim 19, wherein a second value of the arbitration code is operable to be communicated using the network if the first value matches the network value.

23. The message packet of Claim 22, wherein the first and second values of the arbitration code are selected from the group consisting of:

first and second message priority code values;

a first message priority code value and a second sender address value; and

first and second sender address values.

24. The message packet of Claim 19, further comprising a destination code, the data packet operable to be communicated to one or more receivers as a point-to-point, multi-cast, or broadcast message according to the destination code.

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25. The message packet of Claim 19, further comprising a destination code having values for a plurality of positions, each position corresponding to a particular receiver, the values of the positions identifying one or more receivers for the data packet.

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26. The message packet of Claim 25, wherein the value for at least one position of the destination code is operable to be compared with a value for at least one position of a receive code associated with a receiver to determine whether the receiver ~~will~~ receive the data packet.

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27. A method of communicating a data packet using a local area network within a telecommunications device, comprising:

generating a message packet comprising an arbitration code and the data packet;
communicating a first value of the arbitration code using the network;
determining a network value;
comparing the first value with the network value; and
determining whether to communicate the data packet using the network.

28. The method of Claim 27, wherein the device is a switching unit having a backplane and the network comprises a control bus.

29. The method of Claim 27, wherein the message packet is a physical layer message packet and the data packet comprises a message packet associated with a higher level protocol selected from the group consisting of:

Internet Protocol (IP);
Transmission Control Protocol (TCP); and
User Datagram Protocol (UDP).

30. The method of Claim 27, wherein the arbitration code comprises:
a message priority code; and
a sender address.

31. The method of Claim 27, wherein determining whether to communicate the data packet comprises:

determining that the first value does not match the network value; and
~~determining not to communicate the data packet.~~

32. The method of Claim 27, wherein determining whether to communicate the data packet comprises determining that the first value matches the network value, the method further comprising communicating a second value of the arbitration code.

33. The method of Claim 32, wherein the first and second values of the arbitration code are selected from the group consisting of:

first and second message priority code values;
a first message priority code value and a second sender address value; and
first and second sender address values.

34. The method of Claim 27, further comprising:

generating a second message packet comprising an arbitration code and a data packet;

communicating a first value of the arbitration code for the second message packet using the network;

determining the network value;

comparing the first value for the second message packet with the network value; and

determining whether to communicate the data packet for the second message packet using the network.

35. The method of Claim 27, wherein the message packet further comprises a destination code, the method further comprising communicating the data packet to one or more receivers as a point-to-point, multi-cast, or broadcast message according to the destination code.

36. The method of Claim 27, wherein the message packet further comprises a destination code having values for a plurality of positions, each position corresponding to a particular receiver, the method further comprising identifying one or more receivers for the message packet according to the values of the positions corresponding to the receivers.

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37. The method of Claim 36, further comprising:
receiving the destination code;
comparing the value for at least one position of the destination code with the value
for at least one position of a receive code, the receive code associated with a receiver and
comprising values for a plurality of positions, each position corresponding to a particular
receiver; and
determining whether to receive the data packet according to the comparison.

38. The method of Claim 37, further comprising snooping on the network
according to the receive code.

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39. A method of communicating a data packet using a local area network within a telecommunications device, comprising:

generating a message packet comprising a destination code and the data packet, the destination code having values for a plurality of positions, each of the positions corresponding to a particular receiver;

identifying one or more receivers for the data packet according to the values of the positions corresponding to the receivers; and

communicate the data packet to the identified receivers using the network.

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40. The method of Claim 39, wherein the device is a switching unit having a backplane and the network comprises a control bus.

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41. The method of Claim 39, wherein the message packet is a physical layer message packet and the data packet comprises a message packet associated with a higher level protocol selected from the group consisting of:

Internet Protocol (IP);

Transmission Control Protocol (TCP); and

User Datagram Protocol (UDP).

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42. The method of Claim 39, wherein communicating the data packet comprises communicating the data packet to one or more receivers as a point-to-point, multi-cast, or broadcast message according to the destination code.

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43. The method of Claim 39, further comprising:
receiving the destination code;
comparing the value for at least one position of the destination code with the value for at least one position of a receive code, the receive code associated with a receiver and comprising values for a plurality of positions, each position corresponding to a particular receiver; and

determining whether to receive the data packet according to the comparison.

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44. The method of Claim 43, further comprising snooping on the network according to the receive code.

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